

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
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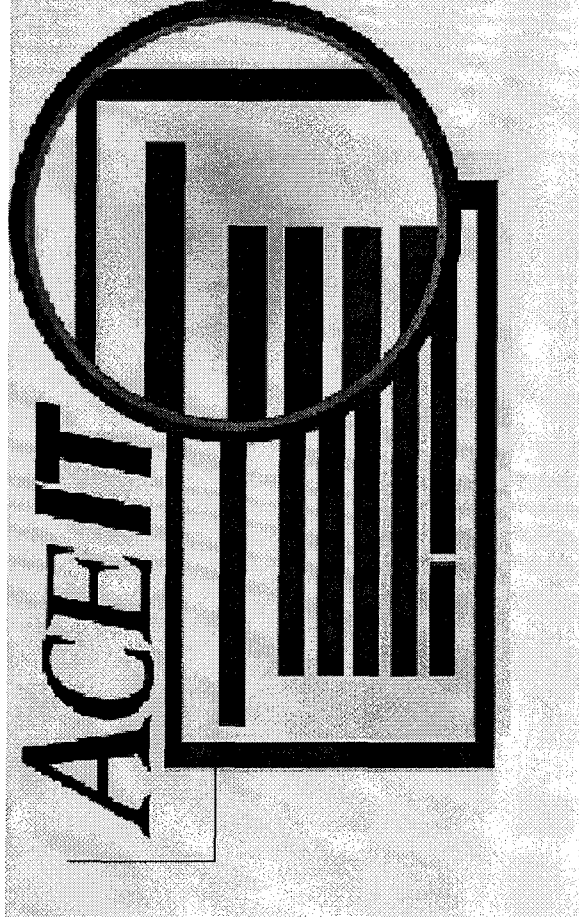
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# “Augmented Computer Exercise for Inspection Training” (ACE-IT)

*A PC-Based On-Site Inspection Training Tool*

*This work was supported by the United States Department of Energy under Contract DE-  
AC04-94AL85000.*



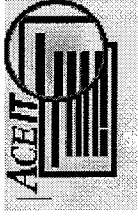


# Inspection Training Goals

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- Learn how to conduct an inspection
  - Collect information so that compliance can be determined
  - Balance the obligation to demonstrate compliance with the need to protect sensitive information unrelated to the agreement
  - Manage time during an inspection (*including planning*)
- Learn how on-site inspection provisions impact compliance determination and protection of sensitive information





# ACE-IT Features

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- Interactive computer program
- Geographic Information System (GIS) -- *information organized by location for each room in a building*
- Exercise clock to control the exercise -- *generates deadline pressures & tracks events*
- Photographic tour to allow participants to "feel" like they are actually in the rooms
- Inspection "hints" provided throughout
- Accompanying "CWC Exercise Packages"
- Log of inspection

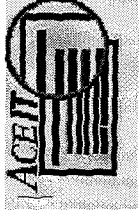


## ACE-IT Features (continued)

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- Perimeter monitoring technologies
- Maps for negotiating the perimeter
- “Managed Access” negotiation techniques:
  - Physical access -- *Inspection Team cannot view areas or information until the Inspected Party grants permission*
  - Shrouding -- *including partial unshrouding*
  - Alternate information -- *chemical sampling, proprietary databases, hazardous waste databases, & equipment inventories*
- Chemical Weapons Convention (CWC) challenge inspection currently implemented; can be modified for other regimes



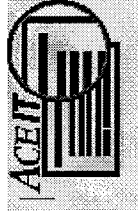


# CWC Challenge Inspection

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- Notification of "challenge inspection"
- Arrive at Point of Entry and specify site
- Inspected Party monitors requested perimeter
- Negotiate "alternate" perimeter
- Travel to site
- Negotiate "final" perimeter
- Pre-inspection briefing
- Inspection Team monitors "final" perimeter
- Inspection
- Post-inspection procedures
- Site post-inspection procedures





# Demonstration

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- The remainder of the demonstration describes how **ACE-IT** can be used to conduct a “challenge inspection” under the Chemical Weapons Convention.
- Although three buildings and all the rooms can be inspected -- for this demonstration, only one room in one building will be inspected.



# Moderator ACE IT Control Module

		6/9					6/16					6/23					6/30					↑		
		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	
1	Notification of challenge inspection																							
2	Arrive at Point of Entry/Specify Site																							
3	Inspected Party Monitors Requested																							
4	Negotiate Alternative perimeter																							
5	Travel to site																							
6	Inspection Team Monitors Perimeter																							
7	Negotiate Final Perimeter																							
8	Pre-Inspection Briefing																							
9	Inspection																							
10	Post-inspection Procedures																							
11	Site post-inspection procedures																							

## INSPECTORS MONITOR MENU

- Lock & seal exits
- Secure site/ exit monitoring
- Personnel at exit
- Traffic logs
- Patrol perimeter
- Detection sensor at exits
- Camera at exits
- Camera around perimeter
- Chemical sample analysis

CWC 4-hour

Scenario

Load

Start

Stop

Exit

More Info

Event Duration  
180 Hours

Exercise Duration (minutes)  
15

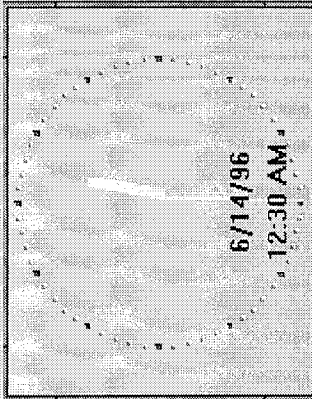
Elapsed Time  
1:02:02

Event Time Remaining (minutes)  
15

Select Options

Save Notes

Jump



☒ 12 Hour Clock

☐ 24 Hour Clock

Reset



## Inspected Party Receives Request



The inspection Team has requested access to room 0510-1-103

☒ Grant Inspectors Access

☐ Deny Inspectors Access

☐ Offer Inspectors Partial Access

☐ Review Alternate Information for this location

Comments/Justification

The entrance to the room is large enough to admit a treaty limited item.

Moderator Comments/Recommendations

None

Send Response

Prints



Preview Room



1. Grant Access if no sensitive items or information will be compromised.
2. Consider Denying Access if sensitive items or information would be compromised
3. Consider allowing Partial Access if viewing the location from window or doorway will provide the inspection team with adequate information.
4. Consider providing alternate information about the location rather than allowing the inspection team access.

# Cancer

## Call Another Player

The inspection Team has requested

- ☒ Grant Inspectors Access
- ☐ Deny Inspectors Access
- ☐ Offer Inspectors Partial Access
- ☐ Review Alternate Information for

## Comments/Justification

**The entrance to the room is large enough to admit a treaty limited item.**

## Moderator Comments/Recommendations

None

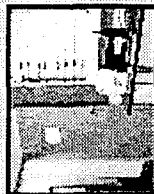
Send Response

53411

# Inspected Party Previews Room



View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)



Zoom



Zoom



Zoom



Zoom

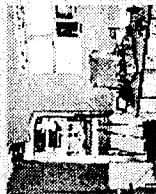


Zoom

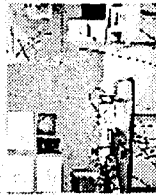


Zoom

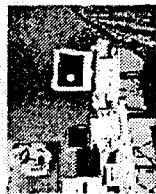
Lift Shroud



Zoom



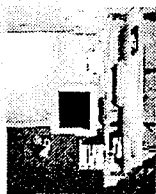
Zoom



Zoom



Zoom



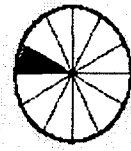
Zoom



Zoom

Lift Shroud

Door



View Through Window, Right to Left (Angle Measured from Right)



Zoom



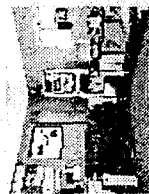
Zoom



Zoom



Zoom



Zoom



Zoom

Lift Shroud

Lift Shroud

Lift Shroud

Lift Shroud

Lift Shroud

Window



Door



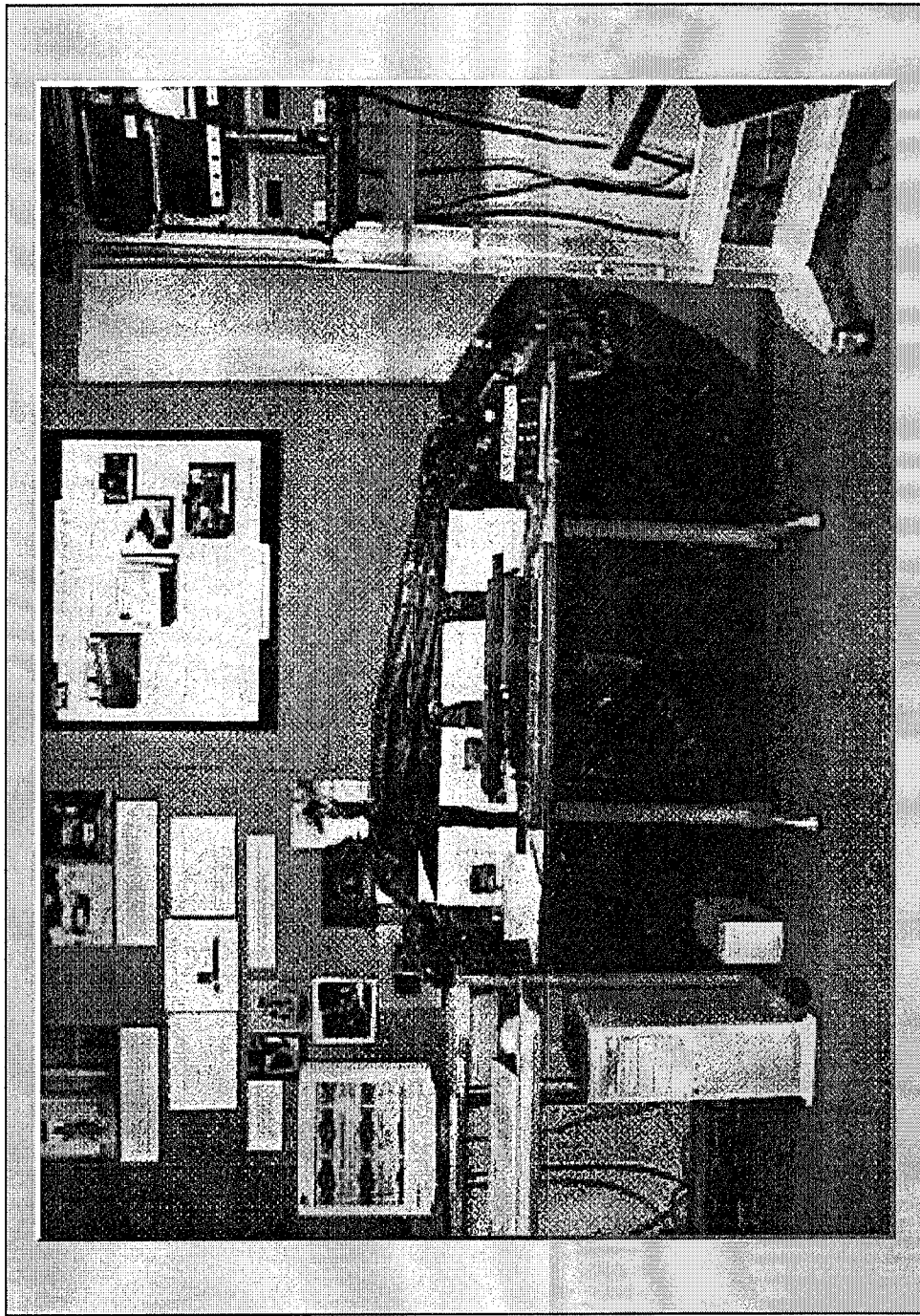
Exit

## Inspected Party Previews Shrouded Item

Table with  
radiation detection  
equipment & gas  
chromatograph.  
Height: 72 cm.  
Width: 76 cm.  
Length: 152 cm.  
Radiation  
detection  
equipment.  
Classified.  
Height: 8 cm.  
Width: 12 cm.  
Length: 20 cm, Gas  
chromatograph  
(commercially  
available, item of  
concern (may  
cause compliance  
questions during a  
CWC inspection).  
Height: 15 cm.  
Width: 25 cm.  
Length: 37 cm

Play

Cancel



100 Percent

## Inspected Party Responds to Request



The inspection Team has requested access to room 0510-1-103



☒ View through Door

☒ View through Window

Please Provide a Justification for Granting Only Partial Access

The entire room can be seen from the window and door.

Send Response

Cancel

Hints

Moderator Comments/Recommendations

None

Hints

## Inspection Team Receives Partial Access



Request for access to 510-1-103 has been limited to viewing through the door and/or window only. Please click on Continue to accept this level of access, Repeat Access Request to negotiate further access to this room.

### Host Justification

The entire room can be seen from the window and door.

### Moderator Comments/Recommendations

None

Continue

Repeat Access Request

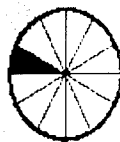
Hints

# Inspection Team Views Partial Access to Room



View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)

Door



Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

Zoom

View Through Window, Right to Left (Angle Measured from Right)



Zoom



Zoom



Zoom



Zoom



Zoom



Zoom

Lift Shroud

Lift Shroud

Lift Shroud

Exit

Window



Door

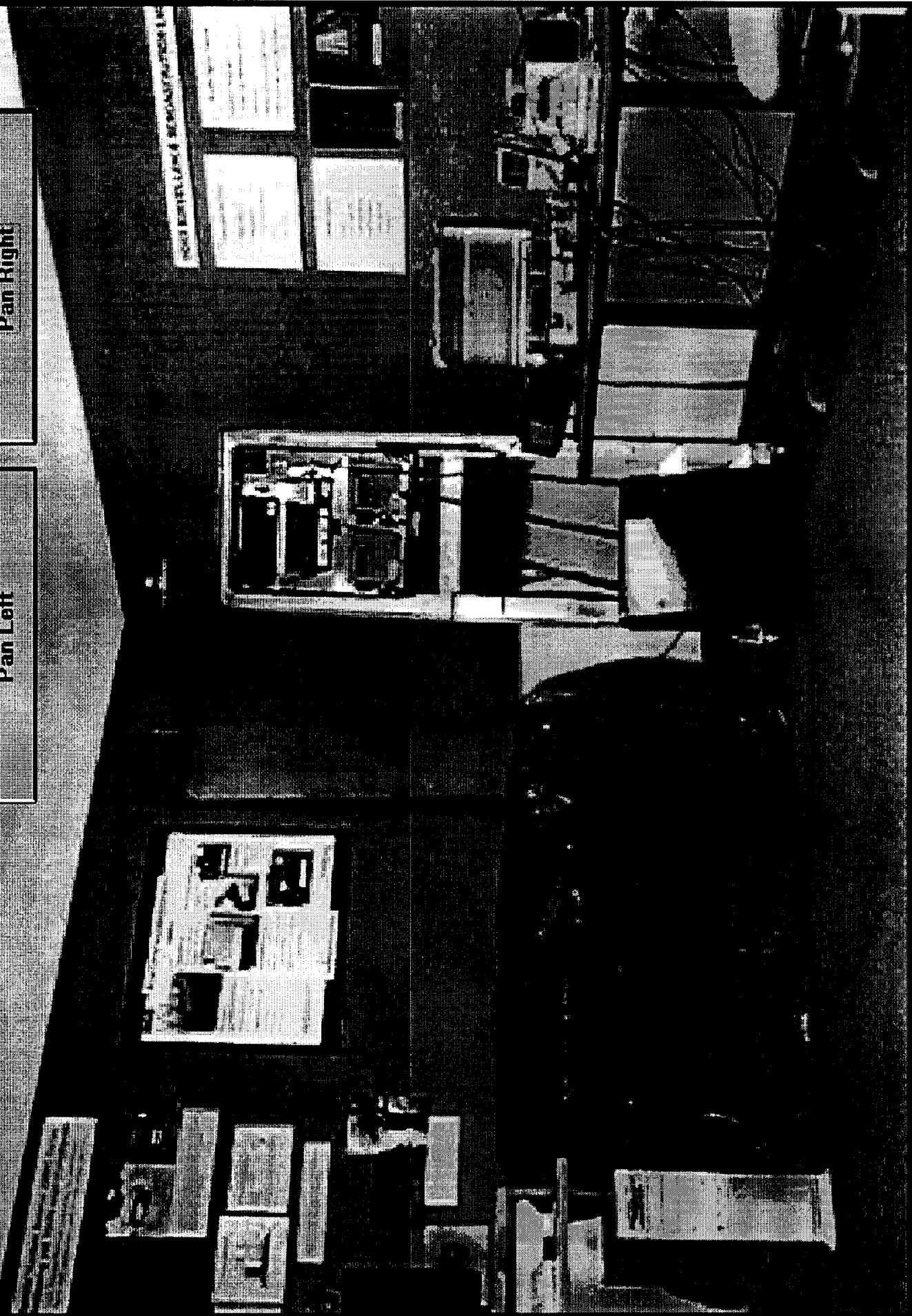


View From Door 45 degrees from right

Double Click to Clear

Pan Left

Pan Right



View From Door 15 degrees from right

Double

Pan Left

Pan Right



## Inspected Party Receives Next Request



The inspection Team has requested access to room 0510-1-103

☒ Grant Inspectors Access

☐ Deny Inspectors Access

☐ Offer Inspectors Partial Access

☐ Review Alternate Information for this location

Comments/Justification

The left corner of the room is not visible from the window or door, and there are large shrouded objects of concern in the room.

Moderator Comments/Recommendations

None

Hints



## Inspection Team Receives Full Access

Request for access to 510-1-103 has been granted. Please click on  
**Continue.**

### Moderator Comments/Recommendations

None

**Continue**

**Hints**

# Inspected Party Views Full Access to Room



View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)



Zoom



Zoom



Zoom



Zoom



Zoom



Zoom

Lift Shroud



Zoom



Zoom



Zoom



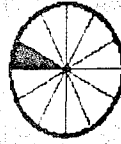
Zoom



Zoom

Lift Shroud

Door



View Through Window, Right to Left (Angle Measured from Right)



Zoom



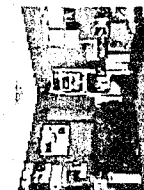
Zoom



Zoom



Zoom



Zoom



Zoom

Lift Shroud

Window



View From Door, Right to Left (Angle Measured from Right)



Zoom



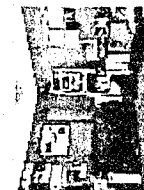
Zoom



Zoom



Zoom



Zoom



Zoom

Exit



Door



# Inspection Team Requests Permission to Lift Shroud



Sand

Exp

Hint

Comments

Please unshroud this object.



## Inspected Party Grants Permission to Lift Shroud 50%

Table with radiation detection equipment & gas chromatograph, Height: 72 cm, Width: 76 cm, Length: 152 cm, Radiation detection equipment, Classified, Height: 8 cm, Width: 12 cm, Length: 20 cm, Gas chromatograph (commercially available, item of concern (may cause compliance questions during a CWC inspection)).

Play

Send

Request Denied



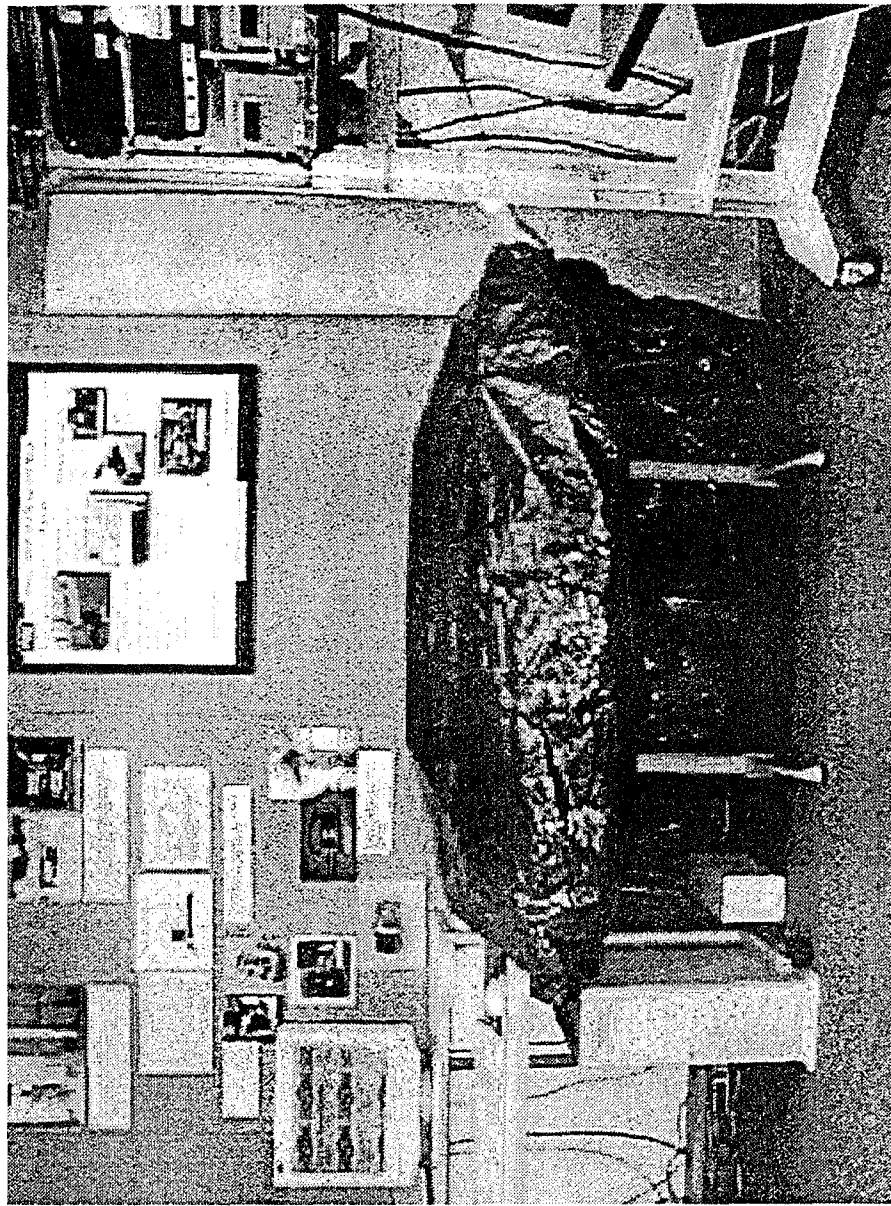
50 Percent

Comments

The object will be partially unshrouded



## Inspection Team Views 50 % Lift of Shroud



Send

Exit

Hint

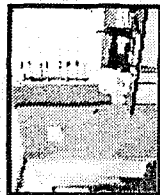
Comments

The object will be partially unshrouded



# Inspection Team Views Full Access to Room

View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)



Zoom



Zoom

Lift Shroud



Zoom

Lift Shroud



Zoom

Lift Shroud



Zoom

Lift Shroud



Zoom

Lift Shroud



Zoom



Zoom

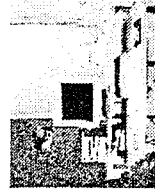


Zoom



Zoom

Lift Shroud

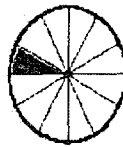


Zoom



Zoom

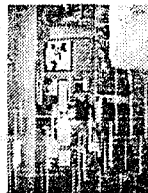
Door



View Through Window, Right to Left (Angle Measured from Right)



Zoom



Zoom

Lift Shroud

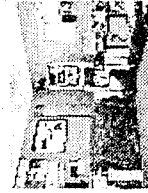


Zoom



Zoom

Lift Shroud



Zoom

Lift Shroud



Zoom

Exit

Window

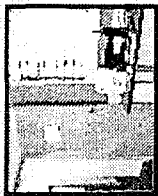


Door



# Inspection Team Views Full Access to Room

View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)



Zoom



Zoom

Lift Shroud



Zoom

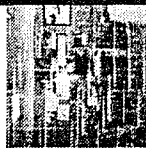


Zoom

View Through Window, Room Measured from



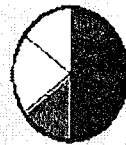
Zoom



Zoom

Lift Shroud

Window



Door

## Inspection Team Requests Alternate Data



☒

Chemical Sampling

☐

Proprietary Research Information

☐

Hazardous Waste Information

☐

Inventory of Items

☐

Other Related Documents

Request All Available Data

Click on the information you wish to request for this location. The color of the text will change. When ready, click Request, and wait. After your request has been reviewed, the check box to the left of each selection will be checked if the inspected party has elected to provide you with this information.

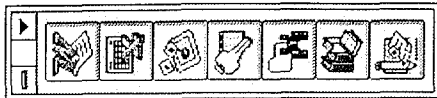
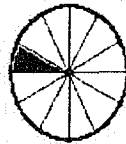
Cancel

Request

Hints

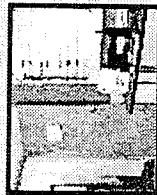
Exit

Door

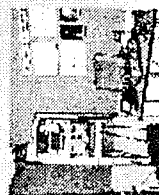


Inspection Team Views Full Access to Room

View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)



Zoom



Zoom

View Through W  
Meas



Zoom

Inspection Team Requests Chemical Sample



Sample ID

Sample ID	510-1	Site	CMC
Time	12:14:42 PM	Building	510
Date	6/14/96	Room	103

Sample Type

(Select only one type)

- ☐ Soil Sample    ☒ Wipe/Other Solid    ☐ Air Filter  
☐ Water Sample    ☐ Process Sample

Analysis Type

(Select only one type)

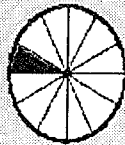
- ☒ Chemical    ☐ Biological    ☐ Radiological

OK

Cancel

Exit

Door




Door



Inspection Team Views Full Access to Room

View From Center, 360 degrees Clockwise, Door to Door (Angle Measured from Door)





### Chemical Sampling Results

Sample ID: 510-1

Time: 12:14:46 PM

Date: 6/14/96

Sample Type: Wipe/Other Solid

Site: CMC

Building: 510

Room: 103

Analysis: Chemical

No chemical items detected

Quit

Door

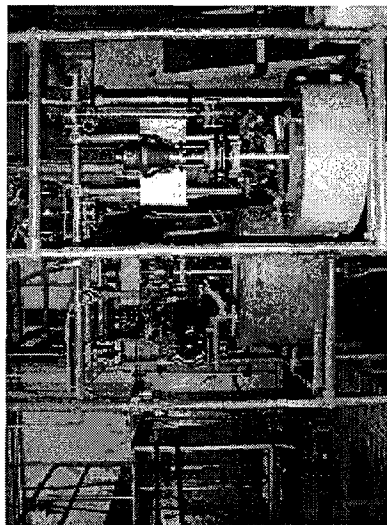


# Other Buildings

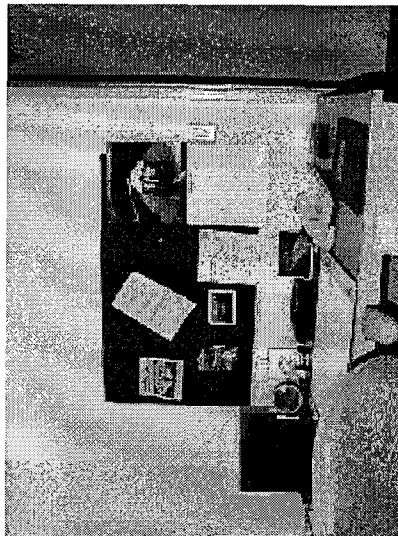
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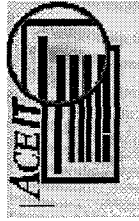
Two other buildings are available in ACE-IT

- A "single small-scale facility"



- An office building





# Summary

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***ACE-IT*** provides a realistic inspection training tool that can be used

- to learn how to conduct an inspection, and
- to learn how on-site inspection provisions impact compliance determination and protection of sensitive information

